Allen Parducci
Professor emeritus
Department of Psychology
University of California, Los Angeles
Los Angeles, CA 90024
aparducc@ucla.edu

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COMMENTARY

Toward a more practical decision analysis: a patient's perspective

Howard Raiffa, a leading figure in decision analysis, has long urged its application to medical decisions: doctors, he suggested, should fill in the probabilities and patients their own utilities.[1] Protheroe and coworkers report a demonstration of how Raiffa's recommendations might be applied. My comments are an attempt to adapt this approach to clinical practice.

The authors used a simple decision tree that illustrates their points but passes over crucial considerations in arriving at both the probabilities and the utilities. Their probabilities for stroke are taken from published frequencies for patients given a diagnosis of atrial fibrillation (AF). This diagnosis lumps together patients without symptoms, like myself, who may have had only a few seconds of documented AF, with patients suffering palpitations or longer periods of AF. It also lumps together patients who have other risk factors for stroke with those who do not. But warfarin may be no more effective than aspirin in preventing strokes in patients with AF that have no other risk factors.[2] Perhaps the probabilities should be filled in by a doctor familiar with both the relevant medical literature and the patient's own condition.

With regard to utilities, input should be sought from someone who knows the patient and who has observed how similar patients have handled the consequences. My internist was able to assure me that warfarin therapy would require less change in my lifestyle than I had imagined. A huge change in my lifestyle would have greatly lowered my utilities for all outcomes of treatment. Some patients with AF might exaggerate the nuisance of the initial period of testing. Estimating future utilities—how it would feel if certain conditions came to pass—is complicated by the difficulty of understanding how the relevant contexts or standards will have changed.[3] For example, people often estimate that confinement to a wheelchair would be a fate worse than death, but victims of accidents who become paraplegic can make astonishingly rapid adjustments to their changed circumstances, reporting that they are "happy to just be alive" and indeed as happy as they were before their accident.[4]

Although Protheroe and colleagues showed that their procedure can be used to measure patients' utilities, its complexity is likely to dissuade practicing physicians from attempting this form of decision analysis. Fortunately, the same information about patients' utilities can be obtained more easily using simple rating scales.[5] For example, the patient rates each outcome on a 9-point scale from "1—Extremely Bad" to "9—Extremely Good." Unless the decision tree has many branches, a computer is not needed to record these ratings or to perform the simple arithmetic calculation of the expected utilities. By using a prepared form that deletes improbable outcomes, the physician might accomplish the entire procedure in less than 5 minutes.

Demonstration by Protheroe and coworkers that patients can participate meaningfully in their medical decisions should encourage simpler procedures for using what patients know about their own utilities.

References

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